

```

result/
|-- 00.RawData/
|   |-- Sample_Name/
|   |   |-- *_1.fq.gz
|   |   |-- *_2.fq.gz
|   |   |-- *.raw_1.fq.gz
|   |   |-- *.raw_2.fq.gz
|   |   `-- *.extendedFrags.fastq
|   |-- SampleSeq_info.xls
|   `-- assembl_stat.xls
|-- 01.CleanData/
|   |-- Sample_Name/
|   |   |-- *.fastq
|   |   |-- *.fna
|   |   `-- histograms.txt
|   `-- QCstat.xls
|-- 02.OTUanalysis/
|   |-- OTUs.fasta
|   |-- OTUs.tax_assignments.txt
|   |-- all_rep_set_tax_assignments.krona.html
|   |-- OTUs.tre
|   |-- otu_table_even.biom
|   |-- taxa_abundance/
|   |   |-- evenabs/
|   |   |   |-- otu_table.absolute.xls
|   |   |   `-- otu_table.*.absolute.xls
|   |   `-- relative/
|   |       |-- otu_table.relative.xls
|   |       `-- otu_table.*.relative.xls
|   |-- taxa_stat/
|   |   |-- Classified_stat.{png,svg}
|   |   |-- classified_stat.xls
|   |   |-- Sample_Tags-OTUs_dis.{png,svg}
|   |   `-- Tags_stat.xls
|   |-- taxa_charts_html/
|   |   |-- area_charts.html
|   |   |-- bar_charts.html
|   |   |-- pie_charts.html
|   |   |-- charts/
|   |   |-- css/
|   |   `-- js/
|   |-- top10/
|   |-- taxa_heatmap/
|   |   |-- cluster/
|   |   `-- OTU_heatmap/
|   |-- taxa_tree/
|   |   |-- *.taxtree.{png,svg}
|   |   `-- all.taxtree.{png,svg}
|   |-- GraPhlan/
|   |   |-- graphlan.{png,pdf}
|   |-- genus_evolutionary_tree/
|   |   `-- genus_100.tree.{pdf,png,svg}
|   |-- ternaryplot/
|   |   `-- *_*_*
|--03.AlphaDiversity/
|   |-- observed_species.{pdf,png}
|   |-- group_observed_species.{pdf,png}
|   |-- plot_observed_species.txt
|   |-- rank_abundance.{pdf,png}
|   |-- group_rank_abundance.{pdf,png}
|   |-- alpha_diversity_index.xls
|   |-- alpha_rarefaction_plots/
|   |-- venn_figure/
|   |-- Flower_figure/
|   |-- Specaccum/
|   |   |-- specaccum.{png,pdf}

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【Raw reads and merged reads】
【Raw data and merged pair-end reads for each sample】
【Read 1 sequences with barcode and primer removed】
【Read 2 sequences with barcode and primer removed】
【Read 1 sequences with barcodes and primers】
【Read 2 sequences with barcodes and primers】
【Raw Tags after reads merging】
【List of barcodes and primers】
【Statistical form for reads merging process of all samples】
【Quality-controlled tags information】
【Results of quality control for each sample】
【Clean tags(FASTQ format)】
【Clean tags(FASTA format)】
【Length distribution of clean tags】
【Statistical table for data pre-processing and quality control】
【OTUs Clustering and Species Annotation】
【OTUs representative sequences (FASTA format)】
【Species annotation results of OTUs】
【Krona taxonomy visualization】
【OTUs phylogenetic tree】
【Absolute abundance after normalization (Biom format)】
【Species abundance information for each sample】
【Absolute abundance after normalization】
【OTUs' absolute abundance】
【OTUs' absolute abundance summarized at each taxonomic level】
【Relative abundance after normalization】
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【OTUs' statistical results】
【Tags abundance layout at each taxonomic level】
【Statistical form of tags' number annotated at each taxonomic level】
【Tags distribution and OTU analysis layout】
【Statistical table of tags number and OTUs number】
【Species annotation results in html format】
【Area chart of species annotation results】
【Bar plot of species annotation results】
【Pie chart of species annotation results】
【Pictures used in the webpage】
【Configuring file of webpage】
【Configuring file of webpage】
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【Species abundance heatmap at taxonomic levels(phylum,class,family,genus)】
【OTUs heatmap result】
【Taxon composition profile】
【Taxon composition profile for each sample】
【Taxon Taxon composition profile for all samples】
【GraPhlan results】
【Figures generated by GraPhlan】
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【Ternaryplot analysis among 3 samples(or groups)】
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【Rarefaction curves for groups】
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【Results of alpha diversity analysis in html format】
【Venn diagram】
【Flower diagram】
【Species accumulation curve】
【Pictures of species accumulation curve】

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|   |-- Alpha_div/
|   |   |-- ACE/
|   |   |   |-- ACE.{png,pdf}
|   |   |   |-- ACE_Tukey.txt
|   |   |   |-- ACE_wilcox.txt
|   |   |-- chao1/
|   |   |   |-- chao1.{png,pdf}
|   |   |   |-- chao1_Tukey.txt
|   |   |   |-- chao1_wilcox.txt
|   |   |-- goods_coverage/
|   |   |   |-- goods_coverage.{png,pdf}
|   |   |   |-- goods_coverage_Tukey.txt
|   |   |   |-- goods_coverage_wilcox.txt
|   |   |-- observed_species/
|   |   |   |-- observed_species.{png,pdf}
|   |   |   |-- observed_species_Tukey.txt
|   |   |   |-- observed_species_wilcox.txt
|   |   |-- Shannon/
|   |   |   |-- shannon.{png,pdf}
|   |   |   |-- shannon_Tukey.txt
|   |   |   |-- shannon_wilcox.txt
|   |   |-- simpson/
|   |   |   |-- simpson.{png,pdf}
|   |   |   |-- simpson_Tukey.txt
|   |   |   |-- simpson_wilcox.txt
|   |   |-- PD_whole_tree/
|   |   |   |-- PD_whole_tree.{png,pdf}
|   |   |   |-- PD_whole_tree_Tukey.txt
|   |   |   |-- PD_whole_tree_wilcox.txt
|-- 04.BetaDiversity/
|   |-- Beta_div/
|   |   |-- weighted_unifrac.{png,pdf}
|   |   |-- weighted_unifrac_TukeyHSD.txt
|   |   |-- weighted_unifrac_wilcox.txt
|   |   |-- unweighted_unifrac.{png,pdf}
|   |   |-- unweighted_unifrac_TukeyHSD.txt
|   |   |-- unweighted_unifrac_wilcox.txt
|   |-- beta_div_heatmap/
|   |   |-- beta_diversity.heatmap.{png,svg}
|   |   |-- beta_diversity.heatmap.UnW.{png,svg}
|   |   |-- beta_diversity.heatmap.W.{png,svg}
|   |   |-- unweighted_unifrac_sorted_otu_table.txt
|   |   |-- weighted_unifrac_sorted_otu_table.txt
|   |-- PCA
|   |   |-- PCA12_2.{png,pdf}
|   |   |-- PCA12.{png,pdf}
|   |   |-- pca.csv
|   |   |-- PCA_stat_correlation1.txt
|   |   |-- PCA_stat_correlation2.txt
|   |-- PCoA/
|   |   |-- unweighted_unifrac/
|   |   |   |-- {*.png, *.pdf}
|   |   |   |-- unweighted_unifrac_dm.txt
|   |   |   |-- unweighted_unifrac_pc.txt
|   |   |-- weighted_unifrac/
|   |   |   |-- {*.png, *.pdf}
|   |   |   |-- weighted_unifrac_dm.txt
|   |   |   |-- weighted_unifrac_pc.txt
|   |   |-- binary_jaccard_dm.txt
|   |   |-- binary_jaccard_pc.txt
|   |   |-- bray_curtis_dm.txt
|   |   |-- bray_curtis_pc.txt
|   |-- Tree/
|   |   |-- unweighted_unifrac/
|   |   |   |-- unweighted_unifrac.{png,pdf}
|   |   |   |-- sorted_otu_table_upgma.tre

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【Box plots for comparison of alpha diversity indices among groups】
【Box plots for ACE index】
【Multi-group variation analysis of ACE index】
【Non-parametric wilcox test of ACE index】
【Box plots for chao1 index】
【Multi-group variation analysis of chao1 index】
【Non-parametric wilcox test of ACE index】
【Box plots for the good' s coverage index】
【Multi-group variation analysis of the good' s coverage index】
【Non-parametric wilcox test of goods_coverage index】
【Box plots for observed_species index】
【Multi-group variation analysis of observed_species index】
【Non-parametric wilcox test of observed_species index】
【Box plots for observed_species index】
【Multi-group variation analysis of observed_species index 】
【Non-parametric wilcox test of observed_species index】
【Box plots for simpson index】
【Analysis of variance of simpson index among groups】
【Non parametric Wilcox test of simpson index among groups】
【Box plots for PD_whole_tree index】
【Analysis of variance of PD_whole_tree index among groups】
【Non parametric Wilcox test of PD_whole_tree index among groups】
【Beta Diversity Analysis】
【Box plots for comparison of Beta Diversity】
【Box plots of Beta Diversity indices based on weigted unifrac distances】
【Analysis of variance among groups based on weighted unifrac distance】
【Non parametric wilcon test based on weighted unifrac distances】
【Box plots of Beta Diversity indices based on unweighted unifrac distances】
【Analysis of variance among groups based on unweighted unifrac distance】
【Analysis of variance among groups based on unweighted unifrac distance】
【heat map of unifrac distances】
【Heatmap of weighted and unweighted unifrac distances】
【Heatmap of unweighted unifrac distances】
【Heatmap of weighted unifrac distances】
【Unweighted unifrac distances】
【weighted unifrac distances】
【Result of Principle Component Analysis(PCA)】
【PCA results with sample names】
【PCA results without labeling sample names】
【Statistical table for each principle component】
【Statistical table of the first principle component】
【Statistical table of the second principle component】
【Principal Co-ordinates Analysis(PCoA)】
【PCoA results based on unweighted unifrac distances】
【PCoA figures based on unweighted unifrac distances】
【Profiling matrix of unweighted unifrac distances】
【Profiling component coordinates statistical table】
【PCoA results based on weighted unifrac distances】
【PCoA figures plotted with paired component】
【Profiling matrix of weighted unifrac distances】
【Profiling component coordinates statistical table】
【Profiling matrix of binary_jaccard distances】
【Profiling component coordinates statistical table】
【Profiling matrix of bray_curtis distances】
【Profiling component coordinates statistical table】
【Phylogenetic tree】
【Clustering results based on unweighted unifrac distances】
【Figures of UPGMA tree based on unweighted unifrac distances】
【Files of UPGMA tree based on unweighted unifrac distances, viewed with MEGA software】

```
| |      `-- UPGMA.UnW.tree.{png,svg}      【UPGMA cluster tree of unweighted unifrac distance combining with top10 phyla distribution】  
| |      `-- weighted_unifrac/            【Clustering results based on weighted unifrac distances】  
| |          |-- sorted_otu_table_upgma.tre 【Files of UPGMA tree based on weighted unifrac distances, viewed with MEGA software】  
| |          |-- weighted_unifrac.{pdf,png} 【Figures of UPGMA tree based on weighted unifrac distances】  
| |      `-- UPGMA.W.tree.{png,svg}        【UPGMA cluster tree of unweighted unifrac distance combining with top10 phyla distribution】  
| |-- NMDS/  
| |     |-- NMDS.{png,pdf}                 【NMDS figures with sample name labeled】  
| |     |-- NMDS2.{png,pdf}                【NMDS figures without sample names】  
| |     `-- NMDS_scores.txt                 【Profiling component coordinates statistical table】  
| |-- LEfSe/  
| |     |-- */LDA.*.{png,pdf}              【Linear discriminant analysis (LDA) effect size analysis】  
| |     |-- */LDA.*.tree.{png,pdf}         【Linear discriminant analysis (LDA) effect size bar plot】  
| |     |-- */LDA.*.res                     【Figures of Cladogram】  
| |     `-- */biomarkers_raw_images/       【Statistical results of LEfSe analysis】  
| |                                     【Figures comparing relative abundance of each biomarker among groups】  
| |-- MetaStat/  
| |     |-- */*.test.xls                    【MetaStats analysis】  
| |     |-- */*.psig.xls                     【MetaStats results at taxonomic level】  
| |     |-- */*.qsig.xls                     【MetaStats results with p value less than 0.05】  
| |     |-- */*.cluster*.diff.{png,pdf,txt} 【MetaStats results with q value less than 0.05】  
| |     |-- */boxplot                       【Heatmap analysis for species with significant differences among groups】  
| |     `-- */PCA                           【Box plot for species with significant differences among groups】  
| |                                     【PCA analysis for species with significant differences among groups】  
| |-- Anosim/  
| |     |-- stat_anosim.txt                  【Analysis of similarities(ANOSIM)】  
| |     `-- *.{png,pdf}                     【Results of ANOSIM】  
| |                                     【Box plot for ANOSIM】  
| |-- Adonis/  
| |     `-- bray_adonis.txt                  【Permutational Multivariate Analysis of Variance Using Distance Matrices】  
| |                                     【Results of ADONIS】  
| |-- Amova/  
| |     `-- stat_amova.txt                   【Analysis of molecular variance】  
| |                                     【Result of AMOVA】  
| |-- MRPP/  
| |     `-- stat_mrpp.txt                     【Multiple Response Permutation Procedure (MRPP)】  
| |                                     【Results of MRPP】  
| |-- t.test_bar_plot/  
| |     |-- */*-VS-*. {png,svg}           【T-test analysis for species with significant differences among groups】  
| |     |-- */*-VS-*.xls                    【Bar plots for species with significant differences among groups at each taxonomic level】  
| |     |-- */*-VS-*.psig.xls                【Statistical results for species with significant differences among groups at each taxonomic level】  
| |     `-- */*-VS-*.psig.xls                【Statistical results with p value less than 0.05】  
| |-- Environmen_factor/  
| |     |-- mantel_test/                     【Analysis with environment factors】  
| |     |-- spearman/                         【mantel_test analysis】  
| |     |-- VPA/                              【Spearman analysis】  
| |     `-- multiCCA/                          【Variance partitioning canonical correspondence analysis】  
| |                                     【Canonical correspondence analysis】  
|-- 05.WebShow/  
| |                                     【Results' comprehensive demonstration in the format of webpage】
```